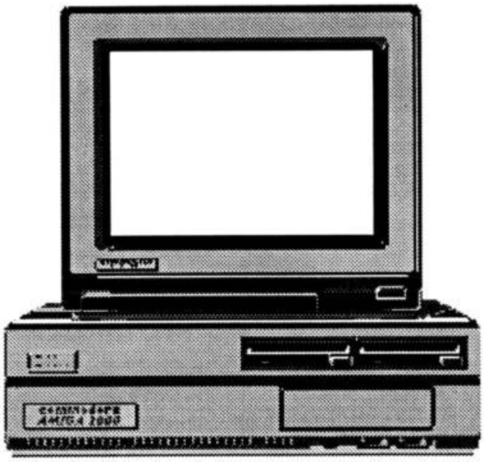
# PCG

Official Commodore User Group #346

## MAY 1992 NEWSLETTER

Pittsburgh Commodore Group P. O. Box 16126, Pittsburgh, PA 15242 Volume 10 Number 5

AMIGA ★ C128 ★ C64 ★ CDTV



# Special Report on The World of Commodore Amiga Show

The World of Commodore Amiga Show was held in New York City on April 24, 25 and 26. I was fortunate to be able to attend all three days. It was the first World of Amiga (WOA) Show that I've attended, although I have been to two AmiExpo's (one last year in New York and one in Washington, DC several years ago). This was the third annual WOA and as in the past was held at the New York City Passenger Ship Terminal which is on 12th Avenue approximately between 45th and 50th Streets.

The show was held at Pier 88, Berths 1 and 2. As you entered the exhibit area you found NewTek's booth. Commodore's booth anchored the far end while GVP was in the center. Altogether, thirty-six companies had booths. Many publishers were represented: Amazing Computing (Amazing Computing, AC's Tech, and AC's Guide), AmigaWorld, Avid (Avid - The Amiga Video Journal and Video Toaster User [formerly Bread Box]), and Amiga News. The Boston Computer Society Amiga Users Group was also represented and selling copies of their incredible Amiga Culture, their monthly COLOR 28-page magazine. This user group magazine has to be seen to be believed! Not surprisingly, Amiga Culture blows away the Boston Computer Society's black and white Mac newsletter. I'll have copies at our next PCG Sunday morning meeting (May 17) for your inspection. I will also have several copies of AmigaWorld to hand out and about 12 issues of Amiga News to give away. Amiga News is an all-Amiga color newspaper which the PCG may be distributing to members in the near future. I also have several issues of Avid to give away and one copy of the Video Toaster User for inspection.

Even though I attended the show all three days, I didn't quite get to see everything I wanted to see. Here are some of the highlights:

NewTek was giving away tons of Revolution video tapes and showing their new Video Toaster 2.0 Demo video. Although I somehow missed

*Continued on Page 9...*

### *This Month's Schedule*
### *Sunday, May 17, 1992*

**9:00 - 9:30** Meeting Registration.

**9:30 - 11:00** Morning Sig Meetings.
Amiga
Beginner-C64-C128

**11:15 - 12:30** General Meeting in the Main Lecture Hall.

**12:30 - 12:45** A small break, PCG Store open and raffle tickets drawn.

**12:45 - 1:45** Afternoon SIG Meetings
GEOS
Amiga - Public Domain

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### *PCG Calendar*

Board members, please note: All Board Meetings are Mandatory.

**Friday, June 5, 1992:** Newsletter articles due on PCG BBS (412) 434-5483.

**Sunday, June 14, 1992:** Newsletter folding and Board Meeting.

**Sunday, May 21, 1992:** Membership Meeting at Duquesne University.

# PCG DIRECTORY

**Pittsburgh Commodore Group (PCG) PO BOX 16126 Pittsburgh, PA. 15242**

## BOARD MEMBERS

| | | |
|---|---|---|
| President | Neal Kushner | 828-3505 |
| V.P. & Librarian | Marilyn Richards | 531-0531 |
| V.P. for Programs | Brian Schwadron | 372-4151 |
| Director of Public Relations | Ed Berger | 828-4710 |
| Treasurer | Mark Snowden | 487-4725 |
| Secretary | John Mulcahy | 921-3947 |
| Board Members at Large | Ed Eichenlaub | 462-2969 |
| | Rick Bilonick | - |
| | Sean Peck | 921-4962 |
| Past President & Duquesne Advisor | Reg Ney | 655-3261 |

**MEETINGS** Meetings are held the 3rd Sunday of every month, except July & August, at Duquesne University's Mellon Science Hall. Visitors are welcome.

**9:00 - 9:30am** Doors open at Mellon Hall. Registration, Doughnuts & Coffee, Vendor's Tables & Flea Market open.

**9:30 - 11:00am** Special Interest Groups AM Sessions.

**11:15am - 12:30** Business meeting and/or Scheduled Speakers in Falk Hall on the first floor. If no meeting or speaker is scheduled, SIG's continue.

**12:30 - 12:45pm** PCG Store opens, Vendor's Tables & Flea Market re-open.

**12:45 - 2:00pm** Special Interest Groups PM Sessions.

**LIBRARY** The Librarians, Neal Kushner and Marilyn Richards, copy **PUBLIC DOMAIN** and **SHAREWARE** disks for PCG Members. There is a small fee for the disk and service. The Librarians also accept donations of software for all Commodore computers, and attempt to help members locate programs in our extensive library.

**PCG BBS** The PCG BBS can be reached at 2400/1200/300 bps, 8 bits, no parity, 1 stop bit. Call 434-5483 24 hours a day. Sysop: John Mulcahy.

**DISCUSSION GROUPS** For those who are new members or are not familiar with the workings of the PCG, we hold discussion groups as a part of the meeting, before and after the regular business meeting. Discussion groups are the informal gatherings that the PCG tries to hold each month so that various users can get together and share their ideas or questions about the many aspects of Commodore computing.

Discussion topics may range from how to set up that new C128 to compose music using machine language or the ins and outs of using your modem with Compuserve or QLink. We hope to establish several varied discussion groups at each meeting and then report back the results or findings in the newsletter the next month. Everyone is welcome to come, ask questions, sit back and listen, offer advice and have a good time.

I would like to know your thoughts concerning discussion groups. If you have a particular subject or idea you'd like to see, this is your chance to speak up. We plan to continue with the C128, Amiga, GEOS, and educational groups on a monthly basis again this year. I would like to expand the groups so that we can introduce graphics, music, telecommunications, etc. to both the new and current members. Please volunteer your service if you can. You don't have to be an expert to lead a group, just have an interest and be willing to share some time with your fellow users.

**Amiga - Rick Bilonick**
**Geos - John Blasdell**
**C-64/C-128 - Joe Keating**
**Video Toaster - Ed Eichenlaub**

**NEWSLETTER** The Newsletter is published monthly. Its $1.50 cost is included in the $20.00 annual PCG Membership Fee. Members are encouraged to submit articles of all types. *Please proofread carefully.* Upload your article to the **PCG BBS.** All submissions received by the last Sunday of the month will be considered for inclusion in next month's issue. You may also mail your articles on paper or on disk to the PCG at the above address. Preferred formats are ASCII, Wordperfect 4.x, TheWriteStuff, SpeedScript, or EasyScript, although other formats may be accepted.
**Editor:** David F. James **Phone: (412) 457-8015**

This issue of the **PCG Newsletter** was created using the following:
**HARDWARE**
Amiga 500P, HP LaserJet III, 1200 baud modem, and perseverance
**SOFTWARE**
Professional Page, DpaintIV, AdPro

**PCG STORE**
The PCG Store features monthly specials on disks, books, magazines, and assorted useful items. See the descriptions in this Newsletter. Back orders, and Mail orders are possible by arrangement with the Manager or Librarian.

**ADVERTISING**

| | |
|---|---|
| Full Page | $60 |
| Half Page | $40 |
| Quarter Page | $25 |
| Classified Ads | **FREE** to Members |

All requests for ads ***MUST*** be accompanied by **camera-ready art** or a pre-approved electronic format (such as a Professional Page file or IFF graphic) and payment in full, and must be received by the first day of the month in which they are to appear. Please mail your requests to the address shown at the top of this page.

**THANK YOU**
To our Supporting Sponsor, Duquesne University

**No copying programs of any type may be run at the meetings.**
**Anyone found using any copying program at the meeting will be evicted. First offense - 3 month suspension. Second offense - permanent suspension and forfeiture of all dues.**
**Visitors may not bring computers or disks.**
**Everyone must register at the sign in desk.**
**Rooms will not be available until 9:30 AM.**

# MEMBERSHIP APPLICATION

Membership Dues are $20 for one year. Bring this application & a check to the next meeting, or mail to:

**Pittsburgh Commodore Group**
**PO BOX 16126 Pittsburgh, PA 15242**

DATE__________ NEW_____ RENEWAL______
NAME____________________________
ADDRESS_________________________
CITY____________________________
STATE________________ ZIP________
PHONE (HOME)_________ (WORK)_________
COMPANY_________________________
OCCUPATION_______________________
EQUIPMENT________________________
________________________________
SIGNATURE________________________

THE CLUB NOW EXCEEDS 250 FAMILIES, and we mail to over 50 other User Groups around the world. The total computerist readers of this newsletter is in the thousands.

# President's Notes

**by Neal R. Kushner**

Well folks the nominations are in. Yes, we have a full ballot. It is now up to the membership to decide who will run the PCG for the next year. It isn't an easy job and it is a job that the individual must want to do because there is a voluntary effort. If you don't know a person and don't know whether or not to vote for them ask around at the meeting before you vote. I asked for and only received one biography to put in the newsletter. (humph) If I receive more Bio's in the mail or otherwise I will try to put an insert in the newsletter.

The only bio received:

### Marilyn Richards

I have been a member of the PCG for four years. For the past two years, I held the office of Vice-President and Librarian. Fearful of going into shock from lack of things to do, I submit my name for the office of Secretary.

Seriously, I work full-time at home as the mother of three, part-time in my husband's antiquarian book business, and part-time as an instructor in the Department of Nursing, CCAC, Allegheny Campus. No, there are not enough hours in the day!

*[John Mulcahy sent his BIO over the BBS -ed]*

### John Mulcahy

Hello. My name is John Mulcahy. I find myself in a rather unique position this year. It seems that I am running for 2 different offices. Because Neal said he wants to see a paragraph maximum for each candidate, I guess that means I get to write 2 paragraphs! Or perhaps I should write 3 but not indent or write 2 very long ones... <GRIN>

Now down to business. I am running for both Secretary and Treasurer. I would prefer to be elected Treasurer. I have served as Secretary for the last 2 years and feel it is time for a change. Because of my experience on the Board for the last 2 years I feel that I am the right candidate for the job. (As an added bonus, let it be known that I have NEVER bounced a check! <GRIN>) I have enjoyed serving the PCG and you in the last 2 years and I look forward to serving you in the future as Treasurer. Thanks for your time.

The ballot of nominations for offices of the Pittsburgh Commodore Group in alphabetic order:

### President

1. Rick Bilonick - Board Member At Large - Amiga Sig Leader- Many articles for the newsletter
2. Joe Keating - 64 Sig Leader

### V.P. & Librarian

1. Bill Kust
2. Robert Peach
3. Sean Peck - Board Member at Large

### V.P. Programs

1. John Blasdell - Past Board Member
2. Brian Schwadron - Incumbent V.P. Programs

### Director of Public Relations

1. Ed Berger - Incumbent Director of P.R.
2. Joe Keating - 64 Sig Leader

### Treasurer

1. Joe Keating - 64 Sig Leader
2. Bill Kust
3. John Mulcahy - Incumbent Secretary - BBS Sysop

### Secretary

1. Bob Jox
2. John Mulcahy - Incumbent Secretary - BBS Sysop
3. Marilyn Richards - V.P. Librarian

### Board Member at Large

1. Rick Bilonick - Board Member At Large - Amiga Sig Leader- Many articles for the newsletter
2. Arden Bomeli
3. Bob Jox
4. Michael Kaefer
5. Martin McNutt
6. Joseph Pfab
7. Ronald Villa

Well folks that is the ballot of candidates for the PCG Elections this month. Come one, Come all and vote. Vote as if the future of the PCG counted on it. It does!

Your Humble (soon to be past) President,
Neal Kushner ❑

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***It is now up to the membership to decide who will run the PCG for the next year.***

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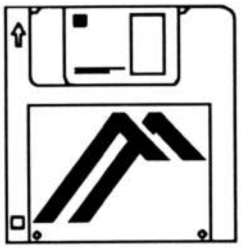
# The Amiga Librarian

by Neal R. Kushner



This month we have The following Fred Fish Disks available:

Fred Fish 601-610

### Disk 601

APipe An "Amiga pipe" device.

Intuisup A shared library update from 562.

PP Patches AmigaDOS for powerpacker update 542.

### Disk 602

JM Job Manager is a programmer utility.

MathsAdv A simple math adventurer game.

MBPress Will detect which mouse buttons are being pressed.

PlotLib Function plotter library.

### Disk 603

DungeonMap A tool that creates maps of dungeons.

DynaCADD Part 1 of a four part demo distribution of DynaCADD.

ICONtrol CLI command gives you control over Workbench icons.

Notify A suite of Rexx programs.

### Disk 604

ArpRequest How to use the ARP filerequester from AmigaBasic.

DynaCADD Part 2 of DynaCADD demo.

MIDIstuff A package of 8 tools that use midi.library.

RingWar A classic arcade game of reflexes.

### Disk 605

DynaCADD Parts 3 & 4 of DynaCADD demo.

HDClick A program selector / Harddisk-menu.

### Disk 606

AlgoRhythms A program that improvises music over a MIDI interface.

AutoGraf Collects and graphically displays information on auto mileage.

FileMinder Utility for maintaining files and directories on a hard disk.

PrFont Prints a sample of each font from the fonts: directory.

SpellCheck A program which aids you in learning foreign words.

### Disk 607

AnimFader A small utility to fade screens in and out.

DosControl A new directory tool.

FishCat A program designed to allow searching the entire library.

### Disk 608

CloneCmdKeys Maps the 2.04 Shell's CUT and PASTE to any keys.

FastLife A fast life program featuring an intuition interface.

Vertex A 3D object editor that differs from other 3D editors.

### Disk 609

AutoPort A software switch for trackball or mouse.

bBaseII A database program with an intuition interface.

You will find a list of video tapes and books that you can rent from the club at the PCG store table at the meeting. If you have books or hardware that is sitting around your house not doing anything donate it to the club and you will get rental credit for it. Please no software, we WILL NOT RENT SOFTWARE.

We have all the Fred Fish disks from 1 to 610.

**PRICES THIS MONTH FOR MEMBERS WITH CARD**

Amiga disk of the month $3 1st, $2 2nd.

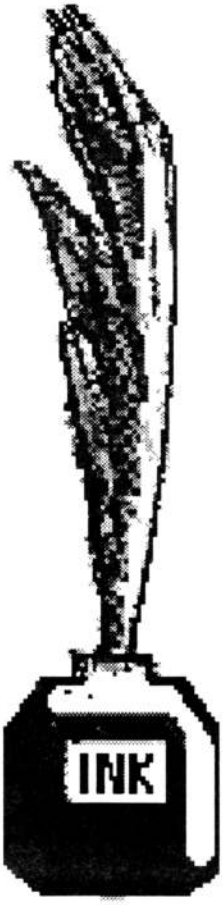
3 1/2" blank Sony disks DSDD $.70 ea

If you know what you want please call and leave an order at 828-3505 between 9am to 9pm by the Friday before the meeting. This will greatly help speed up your delivery.

If you have software that is P.D., like pictures or utilities you've done please donate them to the library. If you have any demo disks, or other P.D. software that is not on the Fred Fish disks please help us share them with other members by donating them to the library. Thanks. So until the meeting, see you.

Your Humble Amiga Librarian,
Neal R Kushner ❑

# Tales from the crypt



It is quite exciting to see the Newsletter that I put so many hours on come to life. The April Newsletter was my very first and I am quite pleased with it. I did find some mistakes that got through.... I am sure you found them too. Please bear with me while I learn the ropes. I am sure that as time goes on I will improve.

I sent away for ProPage 3.0. I can't wait until it gets here. One new feature is the UNDO function. I can really use that! As I do the Newsletter now, if I make a major change to a page and find that I do not like it, I have to delete the boxes of information and start the page over again. Sometimes this can only be accomplished by loading the whole Newsletter in again!

I would love to have more articles from our members to include in the Newsletter. If you write an article and do not have a modem send a letter to me with your article or get it to me at the next meeting. I welcome all suggestions, comments, and any ideas you may have. If any of you members care to write short stories, I would love to put them in the Newsletter. I am always looking for clip art. I know that many of you use your computer for art work. Please let us see your works of art grace these pages. Some of our readers have the Toaster hooked up to their computers. How about sharing some tips you have learned?

**Remember this Newsletter represents all of our members. The way to make _your_ Newsletter the best is to have _your_ input!**

You may write to me at:

346 Meade Drive
Coraopolis, PA
15108

Have a great day! David F. James ❑

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*...Continued from Page 13*

example was SID 1.06. With 2.0 it suddenly opened a small window which constantly intercepted operations and would cause a crash. The latest version of SID fixes that. When these crashes do occur, we are presented with another change. Guru bites the dust... kind of. Rumor had it that Commodore was doing away with the Guru. All they did was give it two new faces. One face pops up on the Workbench screen itself. This has half of the old Guru number we've seen in the past. The first 8 digits are there, but now you are offered a choice of suspend or reboot. Suspend may or may not stop the offending problem, but at least you can finish up what you are doing before resetting the system. Reboot does just what it says. The other face looks more familiar. I've noticed that it comes in two forms. They both appear as a box telling you what has gone wrong, and to push a mouse button to resume. If the box is yellow, this is true. If the box is red, pushing the button doesn't get you a thing. Time to push those three keys. One incident I encountered was during the loading of a large file. The box popped up during load. It was yellow, and I proceeded to push the mouse button 8 times before the file finished loading and proceeded to run as if nothing happened. I believe the programmer was trying to load it in the wrong location of memory, a common problem with those that fail. If I had to pick an area that will be the greatest problem with compatibility, it will be games. If you like playing games with your system, then this could be a real reason for considering a ROM switch, which will allow you to switch between 1.3 and 2.0. The real fix for compatibility for 2.0 will be everybody rushing out and buying it. That may never happen, and as a result 1.3 will be a major consideration for years to come.

At the time of the 3000 release and 2.0 announcement came another upgrade. This was called ECS, which stood for Enhanced Chip Set. Because of this close timing, confusion over ECS prevails. The ECS was originally to be a new 1 meg Agnus and a new Denise chip. Unfortunately Agnus began to get different names, which really mixed things up. The 3000's 2 meg Agnus added to the confusion. The ECS consists of the Super Agnus and the Super Denise chip. The Super Agnus is the 1 meg version of the chip. The ECS was to be released as an upgrade set. Many people acquired the Agnus shortly after it was announced and then Commodore began installing them, but not the Denise. Since the two chips were listed as a set, are those who already own a Super Agnus going to have to buy another to get a Super Denise? No -- and the Super Denise can finally be purchased. If you don't have Super Agnus, get it first, as Super Denise needs Super Agnus. Super Denise is a direct replacement for the original Denise chip. Like everything else, it's the breaking down of your computer setup to get inside that's the hard part of installation. Super Denise does not give more colors. What it does offer are new screen resolutions. Here's a list of all the resolutions now available.

| MODE | Resolution | Colors |
|---|---|---|
| NTSC Hi-Res | 640x200 | 16 |
| NTSC Hi-Res Interlaced | 640x400 | 16 |
| NTSC Super Hi-Res | 1280x200 | 4 |
| NTSC Super Hi-Res Inter | 1280x400 | 4 |
| PAL Hi-Res | 640x256 | 16 |
| PAL Hi-Res Interlaced | 640x512 | 16 |
| PAL Super Hi-Res | 1280x256 | 4 |
| PAL Super Hi-Res Inter | 1280x512 | 4 |
| Productivity | 640x480 | 4 |
| Productivity Interlaced | 640x960 | 4 |
| A2024-10Hz | 1008x800 | 4 Gray Scale |
| A2024-15Hz | 1008x800 | 4 Gray Scale |

These are not the only resolutions, just the main ones.

The most exciting of the group is the Productivity mode -- a non-Interlaced display with no scan lines, it's just the thing for desktop publishing or CAD work. There is a problem though. You need a multi-sync to use it and

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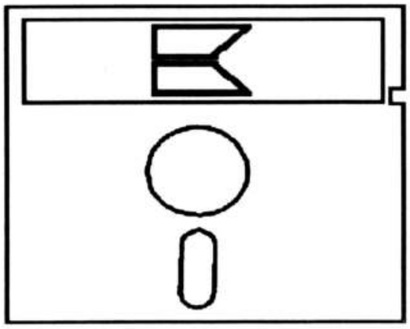
# LIBRARY NEWS

**by Marilyn Richards**



Nominations are over. It was refreshing to see so many C64/C128 users put their name on the ballot. The group is alive and well. Elections will be held during the May meeting. Your vote counts and is needed.

As was announced at the general meeting, The registered version of NOVATERM 9.3 is here. I received it at the meeting. Everyone who registered and was at the meeting received their copy. Two members need to see me for their orders.

Elaine Stachowiak
Matt Troha

When the meeting was over, Robert Peach wanted to show us some exciting things he discovered using this program. To our utter amazement, we found that the PCG registered copy was actually someone else's registered copy. It still is NOVATERM 9.3 with all the extra goodies that the author included, but the opening screen does not have our registration number or name. I wrote to Nick Rossi right after the meeting and mailed the original back to him. I am sure that he will have the correct copy to us by the next meeting. Just bring the copy you received to the next meeting and it will be exchanged for the correct copy with our name and registration number on the opening screen. I apologize for the inconvenience. I should have checked the disk before distributing it.

As per the author, the memory map is on the front side of the disk in a sequential file called "memory map." Use Novaterm's "Print textfile" option to print it out. The documentation is on the back side of the disk in an archived file. This SDA file is very easy to extract. Type LOAD "NOVA9.3-DOC.SDA",8. After the program loads, insert a blank, formatted disk and type RUN. The program will dissolve or uncrunch on that disk. Use the "Print docs" program from within NOVATERM, any sequential file printer (Ultra) or word processor to print out the files. Nick Rossi can be reached for questions or comments on either Q-link sent to "Nick Rossi," BITNET mail sent to "nrossi@hmcvax.claremont.edu," or USENET mail sent to "nrossi@jarthur.claremont.edu."

There will not be an extensive review of the disks this month. Due to commitments at home, the late PCG meeting date and the early newsletter date, I could not find enough hours in the day this week. Next week! I will try to have another disk ready by the meeting.

### DOM 114

The menu does not work on side one. Just load the programs from the directory. I could not get one of the programs to load and another to work. If I am not mistaken, one of the newsletter disks had documentation for the correct loading the Thrillkill program. I will try to find it by the meeting. This side features primarily C64 utilities.

Budget V2.0
Disk Magic V3.0
Tiny Directory
PDQ format
Conquerer
Directory Magic
Rad labels V2.0
MultiDir print+
Thrillkill

Side two features C128 programs.

| | |
|---|---|
| Offbase.128 | 80 col database with docs. |
| Logo 128 V4.0 | 40 col with docs. |
| ShopList128 | 80 col grocery list creator. |
| Budget Butler V3.0 | 40 or 80 column |
| 128 File Edit 1.4 | 40/80 col text file editor |

### DOM 115

This double-sided disk features Shareware Clip Art Albums and Fonts for GEOS. There are only three and eleven blocks free on the disk.

### DOM 116

This is another graphic disk, but these are three block graphics. Remember that the PCG has utilities available to convert three block graphics to two block graphics and vice-versa. Side one features a few of these utility programs and holiday graphics. Side two is a general mix of graphics.

Don't forget to stop at the library table and take a look at the 60 pages of graphics that we have available in both PrintShop and Printmaster format (two and three block format). There are also GEOS graphics disks available, but I don't have them printed out. Look for another disk at the meeting. ❑

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*...Continued from Page 5*

it will slow the system down with bus contention -- but you save the cost of display enhancing hardware. The bus contention will exist with all the newer modes available though. The Super Hi-Res Interlaced is a sight to behold, but it's going to awhile before a useful program comes along that can properly use this setting. The recently released Directory OPUS can use it but the fonts are too small to read comfortably. A fix is in the works. Another feature of the new Denise is a programmable scan rate. This feature has been touted as an advantage to those wishing to take pictures directly from the monitor screen. Other uses are sure to follow. I wonder if there are any hidden capabilities. (Remember Extra Half Bright mode?) Someone will come up with something that was previously thought not possible with this new chip, and the Amiga and its users will benefit from his findings. It is obvious that the 3000 will be more comfortable using these new modes and an accelerated Amiga should be comfortable with them as well. Amigas running the stock CPU may suffer some slow-downs... especially when mutitasking. As things stand, Super Denise can't be counted as a must have. It will become more useful in the future. If you already have a de-interlacing device then Productivity offers no advantage to you. The decision is yours as to whether or not it's worth having for Super Hi-Res.

Will the next major change to the Amiga take this long? Hopefully it will be an all new Amiga -- one that will give us all the features we've been asking for. 24 bit color, 16 bit sound, 32 bit custom chips, and so on and so on...... ❑

# BENEFITS OF MEMBERSHIP

### Marilyn Richards

Recently, my husband decided to upgrade his business computer from a 64K, dual floppy, SSDD, CP/M Osborne to the Amiga, not that he was unhappy with the Osborne at all. It did everything he wanted it to do. In some cases, it just took longer and involved more steps. He managed to work around the bugs in the CP/M version of dBase II and wrote all his own program applications which worked fine over the past ten years. Wordstar saved me many hours of sleep finishing papers for school.

One of the reasons for the upgrade involved my inability to cope with the ridiculous number of disk swaps that were painstakingly necessary to alphabetize the increasingly larger database files that we were accumulating. The only way we kept our (my) sanity was to keep the files relatively small (compared to today's standards). It finally got to the point that it was not worth the effort to alphabetize the larger files...on a computer.

*This is where membership in the PCG really pays. Belonging to this user group provides access to a network of individuals with a broad range of expertise.*

After a lot of reading, talking to users and Kim at CDR, we decided on Superbase Professional 4 as the database program to use for the business. It was capable of reading the dBase II files without having to convert the data. If the data needed to be updated or manipulated, the dBase II files could be converted to Superbase files. The challenge was to get the CP/M formatted dBase II files over to the Amiga.

This is where membership in the PCG really pays. Belonging to this user group provides access to a network of individuals with a broad range of expertise. Several brainstorming sessions resulted in different ways to get the files over. Rick Bilonick, Neal Kushner, Mark Snowden and Al Taffel were instrumental in the successful transfer of the files. To them I owe a sincere thank you, especially for their efforts and patience with my sluggish struggle to learn the system. The system is not difficult to use, it was just difficult working on a new system while keeping up with the responsibilities of my current office. Rick especially provided a tremendous amount of encouragement and reassurance that the task was worth undertaking.

Initially Rick found an article in one of the Amiga magazines that described transferring CP/M files to the Amiga. The article described using the CP/M PIP command to move the data from one device to another. It was sound advice. The only problem was the author could not remember enough about the CP/M language to describe exactly how to do it. I went back to the CP/M manuals and tried to relearn some of these commands. We set up both systems using a gender changer, a null modem and the RS232 port. I attempted to PIP the data to the Amiga without success.

We attempted to use a telecommunication program to send the programs over to the Amiga. We had a 300 Baud modem with the Osborne, but unfortunately the telecommunication program that came with it only supported modem protocol. We sent out some feelers looking for a CP/M telecommunication program that supported XModem and would work on the Osborne.

Al Taffel located BobsTerm Pro for the C128 which had the capability of transferring CP/M files. Voila! I completely forgot about the C128! I have used dBase II on the CP/M side of the C128. So Al brought the program to the next meeting. We set up both systems and attempted a file transfer. Unsuccessful! Now what? BobsTerm Pro would only recognize CP/M files that were stored on the C128 double-sided CP/M+ format.

The next step involved using the C128 CP/M+ PIP command and transferring all the files from the SSDD Osborne format to the DSDD CP/M+ format of the C128. Since these machines operate at 3 to 4 Mhz, this turned out to be a slow process. We again set up both systems, loaded BobsTerm Pro on the C128 ready to transfer the CP/M files, and Diga! on the Amiga ready to receive. However, we could not get the systems to acknowledge each other. It turned out one of the switches on the RS232 cable was switched to the wrong setup. Thanks to Al Taffel for recognizing this oversight on our part. The files were successfully transferred during this attempt.

Superbase Professional 4 handles the dBase II files beautifully. The conversion of the dBase II files to Superbase files, although a lengthy process, went smoothly. As I continue to learn to use the Amiga system with a hard drive and work with Superbase Professional 4, I am constantly impressed with the advanced technology. But because of the complexities of the program, seemingly simple procedures that we did on the Osborne are not as easy to do. Learning to use a menu-driven program after always typing in commands seems cumbersome at times, especially while trying to figure out the branching scheme of the program. Multi-tasking certainly has its advantages. Stepping back out of the programs will take a while to get used to. It all will take time and practice, just as it did before.

In the meantime, I have the advantage of

*Continued on Page 9...*

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## FOR SALE

Radio Control Airplane

**Eagle 63**: Span 63" Length 49" Wing Area 715 sq. in.
Includes full size plans and extras. (already built)
Super Tigre R/C W-M ABC Engine (Very Powerful)
Four channel Radio (Tower Hobbies)

This complete outfit has been sitting in the house unused for several years. The engine has less than an hour and half running time!

This would make a great father/son fun time hobby.

Price: $200 Firm Dave James 457-8015

## THE LAST BYTE

David F. James

# GVP Impact Series II Hard drive for A500

The Impact Series II comes in a well-packed cardboard box which contains a small 26 page manuel (with a single page Addendum), a power supply, a small metal FCC shield, and the unit itself.

The manual is broken down into eight parts:

**Introduction**
**Installing RAM**
**Hooking unit to A500**
**Installing additional hard drives**
**Partition and formatting drives**
**Programmer's documentation**
**Technical specifications**
**Warranty Information**

The outside of the unit has the same coloring as the A500. The case matches the A500 case perfectly down to the ventilation slots.

On the top front of the case is a switch for autobooting. This is also called the "game switch". Push the "game switch" to the right for autobooting or push the switch to the left when you do not want autobooting. If you have Kickstart 1.2 ROM you must leave the switch in the Game position.

Hooking the unit up to my A500 was a breeze! The manuel tells you how to put in the FCC Shield and then the drive unit. (GVP warns you to make sure the FCC Shield goes under the A500 metal shield). After this is done you put the plug in the power supply and turn the unit on. The drive is already formatted with Workbench 1.3. I used the Release 2 software to reformat the drive under Kickstart 2.04.

Impact Series II comes with software called FaaastPrep to partition the hard drive. You can do this automatically, or, if you are familiar with how hard drives operate you can do this manually with total control over the SCSI Quantum drive. I choose the automatic installation with no problems encountered. My drive is divided into four partitions: WorkBench, Art, Words, and Work. I did this in case of a hard drive failure so that I would not lose all my data. Using FaaastPrep, I figured how many Megs I wanted to use and typed the numbers and partition names into the appropriate boxes and the software did the rest. No fuss, no muss! (One thing to remember is that the more partitions you make the more ram overhead is needed).

RAM memory is added by unscrewing three screws on the bottom of the unit, flipping it over, and pulling off the top. (The unit must have been changed since the manual was written in 1990 as the manual states that you must lift off a metal cover to get at the RAM expansion sockets. I did not have to do this as I could see the sockets had no cover). You can put in two, four, or eight megs a RAM depending on the type of SIMMS you use. After seating the RAM into the provided sockets you must set the appropriate jumper cables. This is where I ran into a problem. The manual's directions are a little fuzzy here! I set the jumpers, put the cover back together, hooked it to the A500 and it said I had something wrong. I immediately called GVP and got an answering service, gave them my info, and they said someone would call back. Well, I figured that I just couldn't wait that long. I went back to work on the unit and switched a jumper cable around, hooked it up to the A500 and it worked! The GVP rep called me back within two hours! At least I know someone was there to help if I needed it!

On the FAAAstPrep disk there is also a program to check the RAM expansion memory and SCSI interface to make sure it is working properly. There is also a program to partition the hard drive for MS-DOS.

The only thing that is bad about the Impact Series II is the noisy fan. Although, I am used to hearing it.

I have used the hard drive since February with no problems. I am happy with the product as it makes my life a lot easier. I can put all the programs I use (other than most games) on the drive which speeds up everything. When loading something from a floppy I get frustrated when comparing it to the hard drive. The Impact Series II does not violate your A500 warranty when it is installed as you do not have to open the A500's case. The biggest plus is that it does not tax the A500's power supply as it comes with its own!

## Technical Specs

**Combination 8 megabyte, zero-waitstate, Fast RAM controller and ANSI X3T9.2 compatible SCSI controller**

**Supports up to 7 SCSI peripherals**

**Auto-configs both Fast RAM and SCSI controller**

**Internal 50-pin SCSI connector**

**External 25-pin SCSI connector (DB25)**

**Mini-slot for future expansion**

Have a nice day and Happy Computing! ❑

Happy Spring!

# The Journeyman's Travels

by:
John W. Lasanich

If you've recently acquired a Commodore 64, one of the first things you might want to obtain is a printer. If you pay attention to the following story, you might be saved a trip to the funny farm.

My 64C was in need of a printer. After a brief moment of thought, we opened up the Donnelly Directory and began calling around. As time wore on, we found our choice of options rapidly shrinking. At this point we realized that the 64 had one slight difference to all newer printers.

The 64 was designed to use a serial printer (*Commodore serial*). Almost every modern printer is a parallel printer. So we discovered that what was needed to fix the problem was an interface.

Finding the interface also proved to be quite difficult. By the time we arrived at the PCG meeting, we were next to desperate. Fortunately, a good deal of help was provided and our problems almost solved.

Here is a small list of things to try:

1. If you are a visitor attending these meetings, **DON'T BE AFRAID TO ASK ANY QUESTIONS!!!** I'm quite confident that an answer can be found.

2. Before buying any printer, make sure that you have the proper interface. Also check into it and see exactly what you may need.

3. Speaking of GEOS, it may be advisable to buy the 2.0 version. First however, check into it and see exactly what you may need.

4. Consider joining the PCG. There are benefits to be considered.

5. The company Montgomery Grant, which runs ads in the magazine *RUN*, is the only place I've found that sells the interface. Find a copy for the ordering info.

I'd like to thank you, dear reader, for reading. I'd also like to know if any of my information is wrong. I can be reached at:

**416 Hookstown Grade Road**
**Coraopolis, PA**
**15108**

Please address them to John W. Lasanich.

This story is not intended to scare you away from using or ever purchasing a 64. The Commodore has a lot of life left to it. Finding hardware and software is less stressful once you know where to look.

*[Note: John is a new member as of the April meeting. He is a high school student residing in Moon Township. John does a lot of video work at the Moon Community Access Television Station in Moon. He is an avid writer specializing in short stories. We are glad to have you aboard John.-ed.]* ❑

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participating in a great learning environment, networking with computer users who enjoy doing what they do and like it enough to share their excitement with other members. Thank you, again. ❑

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*...Continued from Page 1*

seeing most of the video, what I did see was spectacular. Included on the demo video are special effects footage of the Babylon 5.0 television science fiction pilot to be aired and syndicated this fall. The demo video shows some of the incredible 3D Toaster work of Ron Thornton. Eight Video Toasters will be used for regular television production of the series. And of course, Kikki Stockheimer was at the NewTek booth.

At the opposite end of the hall, Commodore was showing: Amiga Unix, Amiga 2000's and 3000's for desktop publishing and multimedia, and CDTV. The CDTV demo included quarter frame full motion video via CDXL. Also on-hand were many Commodore marketing people to answer questions, deny rumors, and start rumors. One rumor is that Amiga high-density drives will be available sometime during the next three months. Also heard was that the long-awaited third edition of the Amiga ROM Kernel Reference Manual - LIBRARIES, will be available by May 15. Its supposed to be gigantic. No one would say anything about the next generation of the Amiga, expected early next year.

For my money, the most exciting products being shown but not yet being sold were by Great Valley Products (GVP). First, PhonePak Fax Mail is a hardware/software solution that combines voice mail, answering machine and fax in one easy system. It even allows you to simultaneously receive voice mail and fax. This product is just now available from GVP and will retail for around $400. Even more impressive (at least to me) was the demonstration of GVP's Mirage graphics processing software. This product is squarely positioned to compete against ASDG's Art Department Professional (also at the show). Mirage was being demonstrated by its author and shown with GVP's Impact Vision 24 video board. Mirage's user interface is spectacular and allows all operations in WYSIWYG and real-time. When released in June, it should allow handling of almost all graphics formats (IFF, TIFF, PICT, GIF, JPEG, etc.) and handle most 24-bit graphics boards including the Firecracker 24, DMI Resolver (8-bit high resolution display board), DCTV, ECS Amiga displays, etc. However, the most impressive yet-to-be-released product was the EGS-110/24 high performance graphics board. This board (currently only available for the 2000) is a high-performance RGB output graphics system which offers fully programmable pixel rates from 5Mhz to 110Mhz in true 16 million colors (24-bit) per pixel. This allows the EGS-110/24 to output virtually any horizontal and vertical display resolution and screen refresh rate from standard PAL, NTSC or SECAM video resolutions all the way to highend workstation resolutions such as 1600 x 1280 in full 24-bit color. Importantly, the board comes with an AmigaDOS Workbench driver which allows virtually all workbench compatible Amiga applications to be run directly on the EGS-110/24 without modification. (But note that currently, AmigaDOS 2.0 is limited to 8 bit

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planes or 256 colors out of 16 million colors). I saw the board running on 68030 accelerated Amigas using 1600 x 1280 resolution IDEK monitors. It was incredible seeing PageStream 2.2 and Imagine 2.0 (along with an 8-bit Workbench) running on the EGS-110/24! Of course, this does not come cheap. Depending on the amount of memory, these boards will retail for from $2699 to $3399. These were the most exciting new products, but GVP was also showing its many other 68030, 68040 accelerators, removable hard drives, memory boards, sound digitizers, and numerous products specifically for the Amiga 500 (accelerators, hard drives, PC emulator).

Also seen at the show: Gold Disk showing Professional Page and all of their other products, MiGraph showing and demonstrating their hand scanner and optical character recognition software, Electronic Arts showing Deluxe Paint 4.1, Paralax Publishing showing Foundation, Central Coast Software showing Quarterback 5.0 and many others.

I've brought back a ton of brochures, some including special offers on products. These will be distributed at the PCG Sunday morning, May 17 meeting. Be there!

### Imagine Class Scheduled for May

Duncan Scott has generously agreed to teach a class on using Imagine 2.0. Although a definite time has not been set, it's planned for May. Check out the PCG BBS for the specific day and time. Rick Bilonick ❑

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# Amiga SIG News

**by**
**Rick Bilonick**

Unfortunately, I was not able to attend the Amiga SIG meeting for April 26 because I was attending the World of Commodore Amiga in New York City. My thanks to Neal Kushner and Reg Ney for overseeing the SIG meeting in my absence and Dreux Priore and Fred Potetz for making presentations (Scenery Generator and Amiga 500 hacking, respectively). Assuming that the video tape from Amiga Friends was shown, I hope everyone enjoyed the video.

As I write this, the May 17 Amiga SIG meeting is just slightly more than two weeks from now. So far, this is what is planned for the meeting. People who produce newsletters could use a good scanner and optical character recognition software. A scanner is useful for adding photographs and other non-computer created artwork to a document being created with page layout software (such as PageStream, Professional Page, or Saxon Publisher). Another important use for the scanner is to translate scanned text images into ASCII text which can be directly incorporated into a word processor or page layout program. Basically, scanners come in two types: flatbed scanners ($1,000 - $2,000+) that can handle entire 8.5 x 11 inch (or larger) pages and "hand" scanners. Hand scanners ($200 - $300) are much less expensive than flatbed type scanners and are correspondingly more limited, usually only capable of producing grey scale and line art images. Also, hand scanners can usually only scan a maximum width of slightly larger than 4 inches, require two passes to scan an entire page (which must be joined together). In May's Amiga SIG, I will be demonstrating Migraph's Hand Scanner along with the included Tough-Up software. Migraph is now also provides OCR (Optical Character Recognition) software for turning printed and typewritten documents into ASCII text when used with scanned images. The OCR software is pre-trained on a large number of fonts and can be trained for any particular font set. It can be used with English, German, French or Dutch manuscripts. It can even handle defaced and deformed characters (which are all too frequently encountered with old, poorly maintained typewriters!).

I will also have a large and varied collection of product brochures, handouts and a few magazines gathered at the recent World of Commodore Amiga show in New York City (see Amiga News article for more details). Come early if you would like to get some of these items.

If you are interested in manipulating graphic images (whether created with ray tracing programs or created with a scanner), future SIG meetings will cover the use of the Art Department Professional. Art Department Professional ("AdPro") can handle 24-bit graphic files of virtually any format (which includes all Amiga native graphics, 8-bit grey scale, and images generated on virtually any other computer platform including MS-DOS, Windows, Mac, Atari, Sun, X-Windows etc.). AdPro can also be used as an interface to many 24-bit graphics boards such as the Firecracker and Impact Vision 24 and framegrabbers and the Epson flatbed scanner. Also to be covered in an up coming SIG meeting will be Maple V, the most sophisticated symbolic and numeric mathematics program available today. Maple V is available on virtually every computer platform including mainframes, minis and micros. Anyone using mathematics in their work or studying mathematics will want to check Maple V out. Maple V can be used to determine differentials and integrals symbolically and then evaluate them by producing a numerical approximation. The results can also be graphed in 2 or 3 dimensions using virtually any coordinate system (e.g cartesian or polar). Maple V has over 2,000 mathematical functions. A number of "packages" are also available, including statistics, linear algebra, geometry, 3D geometry, etc. Maple V also provides the ability to create your own user defined procedures which can be assembled into a package.

Also for those interested in newsletter production, a future Amiga SIG will cover the use of PageStream 2.2 along with BME (Bit Map Editor) and PageLiner (a "text" processor). These 3 programs can be "hot linked" together. Hot linking allows you to create a single text or graphics file which can be simultaneously be used in PageStream for page layout yet be further manipulated/changed with either BME or PageLiner. This saves disk space and puts an end to having to have multiple copies of the same material.

If you are using any software or hardware that you think is interesting, consider sharing it with us in a future SIG meeting. Leave me a message on the PCG BBS or talk with me at the next meeting. ❑

# Data Compression How does it work? -- an introduction

### by Charles Lacour

***Reprinted with the permission of the Metroplex Commodore Computer Club***

The club bulletin board recently got two new modems, 2400 baud with both MNP-5 and V.42bis data compression. This article is for those who are wondering what those terms mean, or those who are interested in knowing how it all works.

First, a definition: data compression simply means taking something that is long (=large, =slow) and replacing it with something short (=small, =fast), according to a scheme that will allow you to turn it back into its original form when you need it. (That second half is rather important, by the way...)

It doesn't matter whether you're trying to save disk space by making the files smaller, save time (and/or money) in up/downloading files from a BBS, or speed up response with interactive software somewhere else -- the idea is to put the data in a smaller form, so that whatever you are going to do with it, you don't have to do as much of it.

## HISTORY:

MNP-5 and V.42bis are two schemes for doing this compression/decompression process when transferring data, usually via a modem. MNP-5 stands for "Microcom Network Protocol, Class 5".

There are (currently) 10 protocols, which are downward compatible (a modem which can handle MNP-8 can automatically handle MNP-5). MNP-5 and MNP-7 are the compression protocols -- the others are mostly error checking and correction. Since we don't have it, I probably won't go into MNP-7. "V.42 bis" is the Consultative Committee for International Telephone and Telegraph's (CCITT's) recommended protocol for data compression. Don't take any of this as gospel, but to the best of my knowledge, CCITT is a public standards group, somewhat like ANSI. I have no idea what connection, if any, it has with the company ITT, but as far as I know, nothing it produces is proprietary. They have some truly strange habits for naming things -- the "V.42" is the name of the protocol, and 'bis' is the version. If you don't mind, I'm going to refer to it as just V42 from now on.

## COMPRESSION TECHNIQUES:

I'm not going to try to cover all of the compression techniques used, or thought up -- just the more important ones, and in particular the ones used in MNP5 and V42.

* **Run length**: This takes a repeating sequence of characters (a line of asterisks, for example) and substitutes a marker string and a count. For instance, say I have a line of 72 asterisks that I want to compress. Since it doesn't show up very often in ordinary text, I use a '@' as my marker, and the resulting string is @*<72> (the brackets indicate a one-byte binary number). Obviously, this 3-byte string won't take nearly as long to transmit as the original 72 characters. With this scheme, any time you have four or more of the same characters in a row, you save space. Blanks are far and away the most common character to get trimmed down this way.

* **Pattern substitution**: This is a very powerful, but limited, technique. You substitute a short code for a long string. For example, let's say we're going to use the 128-character ascii set for individual letters. We're going to use the binary numbers 32768 thru 65536 as codes. This gives us a nice, simple rule to use: if the high-order bit on the byte coming in is a zero, this byte is a letter. If it's a one, then it's the first byte of a two-character codeword. This gives us a possible dictionary of 32K words that we can represent with only two bytes apiece. The advantages of this technique are that it is fast and cheap (in terms of CPU time) and gives you a high degree of compression, especially for the ease with which it can be done. The down side is that it is very data-dependent. A dictionary that is superb for ASCII text would be a disaster for a compiled program.

I'd like to try setting something like this up for the bulletin board, especially for the menus and messages. Since the menus don't change but once in a blue moon, you could send the entire menu (a few hundred characters) in one or two bytes! How's that for compression? There are a lot of problems with making a change like that (how to handle people who don't have it, for one) and this isn't even to the point of vaporware yet, so don't get your hopes up too high. If there is enough interest in it, I'll talk to the sysops and see what the possibilities are. (Note from the sysops: It would be extremely easy to send a two byte menu. [Messages are improbable.] The problem would be devising a scheme to interpret it at the other end. Such a critter doesn't exist -- and if it did would have the major disadvantage of using valuable computer resources since it would necessarily be a software solution.)

* **Huffman coding**: Huffman (named after the guy who invented it) coding is a little different than the previous types, because it doesn't deal with things at the byte or word level, it does things in terms of bits. The basic idea is to use a short string of bits (maybe just 1) for frequently used characters, and use longer strings for less frequently used characters.

A short historical note: Huffman didn't invent the idea of using varying-length bit strings for compression. He did invent an algorithm for figuring out which characters should be represented by which bit strings that is guaranteed to produce the shortest average string length (which means the highest degree of compression). Huffman encoding suffers from the same drawbacks as pattern substitution -- it works great on files that have the same distribution of characters as the table was originally built for, but it can be horrible for something with a drastically different layout (ASCII vs. binary programs pops to mind again). Which brings us quite nicely to the next type,

* **Adaptive Huffman coding**: One small change to a Huffman-code using program can make a real big difference in how well it works: a count field. Let's say you're using an English language distribution table, where the letter "e" is the most frequently used. For the example, we'll assume it has a bit string of "01" and the letter "t" has a bit string of "101". In "typical" English text those are reasonable, because "t" is a close runner-up in frequency to "e". Now say we run the program on a file

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that (for whatever reason) has noticeably more "t's" in it than "e's". Without the count field, we're stuck -- we're going to have 1500 3-bit strings and 800 2-bit strings (I'm ignoring the rest of the characters for this example). With the count field, we bump a counter each time we have a "t". When this counter exceeds the counter for the "e", the two of them swap places. Now a "t" is "01" and "e" is "101". You do this on both compression and decompression so that you don't need any kind of message to the decompression routine saying "the table changed". The decompression routine starts out with the same table and algorithm for adjusting it as the compression routine, so it automatically adjusts the table the same way. The end result might look like this:

| | 2-bit strings | 3-bit strings | Length (bits) | |
|---|---|---|---|---|
| | | | Average | Total |
| Standard Huffman code: | 800 | 1500 | 2.65 | 6100 |
| Adaptive Huffman code: | 1478 | 822 | 2.36 | 5422 |

* **Lempel-Ziv string encoding**: I'm a little frustrated on this, because the book I'm getting the majority of my info from doesn't go into nearly as much detail on this as it does the others. Add the fact that it is a more complex technique and the end result is that I'm pretty vague on how it works. Since most of what little detail I do have is for the modification of it that V42 uses, I'll put the "how it works" stuff in that description and just mention a few interesting little tidbits here.

The algorithm is named after Abraham Lempel and Jacob Ziv, who first published it in 1977. The basic concept is to dynamically build a table of strings, each represented by a codeword. It has the roughly the same relationship to pattern substitution that adaptive Huffman encoding has to the standard Huffman code.

The program ARC, (originally developed for IBM PC's, and later ported to other environments) uses one of three algorithms for compressing files, whichever gives the best results:

1. No compression (which guarantees the archive will never be larger than the original file)
2. Run length substitution
3. Lempel-Ziv string encoding

Since the program LZ was originally written to do ARC's job, but do it better, anybody want to take a wild guess where its name came from?

### MNP-5

(Didn't think I was ever going to get here, did you?) MNP5 uses a two stage compression algorithm: First it uses run-length encoding to eliminate any long strings of characters. The "repetition" flag is three occurrences of the same character, such as "CCC" or "***" followed by a one byte count, ranging from 0 to 250. 0 means it is just the three characters.

Next, it uses an adaptive bit-string code. I started to call it an adaptive Huffman code, but they don't use a Huffman code. The code they use ranges from 4 to 11 bits in length. This is something of a weakness, because the best compression factor they can hope for is 2 (8 bits / 4 bits). Only the 32 most common characters can be expressed in 7 bits or less, which means the other 224 either get no compression or are actually longer than they would be without "compression". On the other hand, with most data, the 15 most common characters (all of which are six bits or less with this scheme) account for more than 50% of all the characters. The end result is a compression ratio of somewhere between 1.5 and 2.0 for most data. Worst case is a compression ratio of about 0.73.

### V.42 bis

As mentioned earlier, the Lempel-Ziv string encoding algorithm is the heart of the V42 protocol. The algorithm consists of a table of strings, routines for finding/matching them and routines for adding and deleting strings from the table. The table starts out with the 256 possible values of one byte, each defined as a one-byte string. These "strings" are a permanent part of the table -- they cannot be deleted. (Note: from here on, I'm winging a lot of this. I just don't have many of the details I need to give an accurate example of how V42 works. What you're about to see is my concept of how something like it would be set up. Some of the details, like how many bits the codeword is, are invented out of thin air. I'm also going to gloss over some of the technical difficulties in implementing something like this. Sorry, but it's the best I can do at the moment, and this article is at least a month behind schedule already. If I can get some specific info on V42, I'll do an in-depth article on it later.)

For this example, codewords are 10 bits in length, which gives us 1,024 possible strings, of which 256 are

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## Stores Displaying PCG Newsletter

The following stores carry products of interest to PCG members and provide an outlet for our newsletters:

**Babbages** (Century III Mall) C64/128 software.
**Babbages** (South Hills Village) - C64/128 software.
**Babbages** (Ross Park Mall) - C64/128 software.
**B. Dalton Books** (South Hills Village Mall) - Books, magazines, and Amiga disk magazines.
**Border's Books** (Norman Center II - near South Hills Village) - Books and magazines.
**Carnegie Libraries** (all branches) - PCG Newsletter.
**CDR Systems** (Washington St., Swissvale, PA) - Amiga hardware, software, and magazines.
**Electroniques Boutiques** (Ross Park Mall) - Amiga, C64/128 software.
**Games and Gadgets** (Century III Mall) - Amiga, C64/128 software.
**Pittsburgh Computer Store** (Rt. 51 near Century III Mall) - Amiga hardware, software, books, and magazines.
**Second Childhood** (Beaver Falls) - C64/128 hardware and software.
**Software ETC.**, Kaufmann's Downtown 9th floor - Amiga, C64/128 software.
**Sun Appliance Stores** (all stores) - Amigas.
**Upper St. Clair Library** - PCG Newsletter.
**Waldenbooks** (South Hills Village) - Books and magazines.

# 2.0 and ECS

### *by Johnny C. Kitchens*

***[Reprinted with permission of the Metroplex Commodore Computer Club]***

Finally after a very long wait everyone can now have 2.0 for their Amiga. This line probably makes as an important a statement as any that an Amiga owner could want to hear. 2.0 has been on the minds of Amiga owners for a few years now and has been mentioned probably as much as anything else combined. The Toaster has been big, but 2.0 will be within the reach of many more users and more will end up with it. Writing a full review of this new operating system would probably take a full length book, so I've decided to give general coverage and give you an idea of what 2.0 is all about.

From the beginning the Amiga has received a steady upgrade to its operating system. Each upgrade appeared to be a clean-up or fine-tuning of bugs that popped up along the way. With the arrival of 1.3, it appeared that Commodore had it right. It was right as far as that particular way of doing the OS was concerned. Many users of other computers had comments on the OS. "Why did they make look that way?" "It appears that a child drew it with crayolas." "Why is it so hard to do this or that with it?" Many of these question are legitimate, but did Amiga users really care? Commodore realized that improvements were needed and that a look more appealing to professionals was definitely needed. Early rumors of the new OS had it going by the name of 1.4. Apparently Commodore wanted to make it clear that the new OS wasn't just a step, but a leap for the Amiga. 2.0 became the new name. For many the first view of 2.0 would come with the introduction of the 3000. Commodore announced a release date for the rest of the Amiga line in September. But suddenly Commodore had a problem they hadn't taken fully into account: compatibility. Reports of the new OS not working with existing software generated negative thoughts for many people. It looked as if buying 2.0 would cause extra spending upgrading software. This was one of the major reasons for the hold up on the release of 2.0. So -- was it worth the wait? Definitely!!!

First thing about 2.0 to come to grips with will be installation. Installing the ROM chip isn't the hard part -- it's the software. If you've been using your Amiga for any length of time you've probably put together a Workbench that you are comfortable with and you know where everything is. People with hard drives and a large collection will have the most work... backing up their 1.3 stuff until they are sure of what they don't need -- and then setting up a totally new Workbench. I'm sure there will more than a few who will take a look and worry. Although many things will be familiar, there is just as much that will be new. It looks different due to color rearrangement -- and more colors. The menu bar has many new commands to use, and even the controls are new. There are still two little boxes up in the right corner of windows and drawers... but with a difference. I've clicked on the left box several times now trying to move the window back only to see it resize. It's a zoom control which allows you to set the window size to one of two settings. The right button now performs the function of both buttons of 1.3. It's great that you can set the background of Workbench to whatever you want. You can definitely customize the whole thing to your heart's consent.

Setup will eventually lead you to a radically reworked Preferences, although different setups for many things are now simpler and straightforward. Perhaps the greatest change here is the screen setup. If you have the proper monitor and the Enhanced Chip Set, you can select all available screen modes with the click of a mouse. Finally PAL is just a click away. Each selection gives you its characteristics and requirements. Just as impressive, the new font selector now allows you to select fonts for three different areas. Workbench icons text, screen text, and system default text now can each have their own font. 2.0 now supports its own scalable fonts, and provides a program called Fountain which allows you to set your own custom font sizes using the scalable fonts provided. This ability will become more important with time, especially in the use of the higher resolutions. Super Hi-Res definitely needs more than a 8 point font.

In operation, 2.0 will seem both new and old. The first thing I noticed was that the disk drives are quieter in operation, running virtually silently compared to the old buzz I used to get. Unfortunately the clicking we've all come to detest is still there. WHY? You can now boot up a disk from any drive with 2.0, which will take a load off of poor old DF0:. Now we have FFS available to the floppies. Once you have used a FFS floppy, going back to OFS will be hard to do. There is more room (about 50k), it's quicker, and it's much improved overall. Unfortunately 2.0 will have to be around for awhile before it becomes common. Many operations are quicker due to things having been moved from disk to ROM, and to improved coding of the commands themselves. The user will find most operations the same as always, double click and go. Icons created with 1.3 will look different in 2.0 due to color changes and a new embossed look. Extended selection has been radically changed -- it's now a mouse only operation. Simply stretch the electronic equivalent of a rubber band around the icons you want to manipulate, and they are all selected ready for you to manipulate in any way you want. Many have expressed a dissatisfaction with 1.3's ED command for editing text files. 2.0 now offers a configurable ED, letting you set up commands, macros, and menus to your liking. Consider it a roll-your-own editing tool.

I hope I've given you some idea of the changes that have been made. One thing is for sure, if you've been bored with your Amiga, you can look forward to setting up your new OS. The manual alone should be worth the price. I'm glad to see them go back to the style of the 1000 manual -- a ring binder. But it's big and heavy, and it has a strange ring shape. Trying to move quickly through the manual is a bit hard. The pages repeatedly stick on a corner bend of the rings. The manual is very well laid out, complete with heavy index pages, allowing you to find certain sections instantly. Just don't expect to turn too many pages quickly.

I'm sure compatibility is weighing heavily on the minds of many. I've had excellent results with commercial software and less so with PD. Most PD software works fine, but I've noticed older software having problems. An

*Continued on Page 5...*

*...Continued from Page 12*

used up by the one-byte codes. If we don't keep those, it's entirely possible we could end up with a string of bytes we had no way to send.

The first sentence we're going to send is "THE TAPE WENT TO THE TOWN." I'm using all capitals for simplicity's sake.

Codes are shown as <###>. The number is in decimal.

| Current string | Transmitter action | Receiver action |
|---|---|---|
| T | send <84> (T) | decode. make "T" current string. |
| H | send<72> (H) | decode. add new string "TH" to add "TH" to table, table, code # 257. make "H" code # 257. current string. |
| E | send <69> (E), | decode. add "HE" as #258 |
| (blank) | send <32> and add "E_" as #259 | decode. add |
| T | send <84> and add | add "_T" as #260 |
| A | send <65> and add | add "TA" as #261 |
| P | send <80> and add | add "AP" as #262 |

So far, we've sent 70 bits to do the work of 56. Now is when it begins to pay off...

| | | |
|---|---|---|
| E | send <259> (E) | decode. no table changes. |
| W | send <87> | add "E_W" to table as # 263 |
| E | send <69> | add "WE" as #264 |
| N | send <78> | add "EN" as #265 |
| T | send <84> | add "NT" as #266 |
| T | send <260> (_T) | decode |
| O | send <79> | add "_TO" as #267 |
| TH | send <257> (TH) | decode |
| E | send <259> (E_) | decode |
| T | send <84> | add "E_T" as #268 |
| O | send <79> | add "TO" as #269. |
| W | send <87> | add "OW" as #270 |
| N | send <78> | add "WN" as #271 |
| . | send <46> | add "N." as #272 |

Grand total results: 210 bits via this technique, versus 208 if had been sent with straight ASCII. But, we've added several useful strings to our table ("EN", "NT", "TH", "TO"), or if you prefer, we've sent the string with 208 bits, and added 16 entries to the table with an additional two bits. You can see even with this very short sample that the frequency of "hits" was climbing as we went along. Admittedly, this was a very artificial sample, specifically designed to produce a few hits, but in real life, by the time you've sent a page or two of data (1-2K characters) you'll be getting a noticeable improvement.

Discussing the efficiency of the V42 protocol is difficult, because it depends rather heavily on how the particular modem is configured. The standard allows for a maximum string length anywhere from 6 to 250 characters, and requires a minimum of 512 strings. When they connect, two V42 modems negotiate what the maximum string length and number of strings is going to be. If you have a V42 modem and have been getting drastically different results at different times, that could be why. If you're connected with a modem that can only handle the bare minimum, you're not going to get as good a result as one with a lot of room to spare. The bulletin board's modems use a maximum string length of 16, and a dictionary of 1,024 strings.

Generally speaking, you can expect a V42 modem to be 1.25 to 1.5 times as fast as an MNP5 modem. In many instances, effective throughput is about 4 times as fast as it would be without any compression -- effective 9600 baud from a 2400 baud modem, in other words.

One last comment on efficiency -- any compression technique has the potential to make things worse than when you started. MNP5's run length scheme (3 of the same character followed by a count byte) will have fits over a file that goes (in hex) "00", "00", "00", "01", "01", "01", ..."255", "255", "255" and repeats. It will blow the original file up by 33%, and since all 256 possible values for a byte are being used, the adaptive bit encoding isn't going to help much either. V42 wouldn't have nearly so much trouble with it (it's considerably harder to 'fool' than MNP5 is) but it's possible to hand V42 a file that drives it nuts also. I mention this because a .LZH file comes as close as anything you'll meet in real life to a random file. Expect to get much smaller performance improvements when up/downloading archived files than when looking at messages or downloading text. Results from a recent test I did:

| Compression Scheme | | None | MNP-5 | | V.42 bis | |
|---|---|---|---|---|---|---|
| Item | Size | time | time / | ratio | time / | ratio |
| Home1c.zip | 255K | 18:25 | 16:18 | 1.13 | 15:52 | 1.16 |
| Pool.lzh (HAM) | 163K | 9:45 | 9:22 | 1.04 | 8:25 | 1.15 |
| 13 .txt files | 60K | 4:10 | 3:00 | 1.39 | 2:27 | 1.7 |

(Thanks go to Johnny Kitchens for providing the V42 figures.)

If you're considering a new modem, I'd strongly recommend one with both MNP-5 and V42. V42 is definitely the better compression algorithm, but MNP-5 is more common. Fortunately, since V42 requires so much more processing power than MNP-5, it is fairly trivial to add MNP-5 to a modem that already has V42, so many manufacturers do so. The down side is that having that much processing power in a modem isn't real cheap -- expect to shell out a healthy dose of extra money to get V42 over a plain 2400 baud modem. It is possible to get a 2400 baud modem with just MNP-5, but I don't really recommend it. The price of the V42 modems is dropping fairly rapidly, and MNP-5 is on its way out, not in.

Incidentally, V42 is available on 9600 baud modems, also -- it is a generic compression algorithm, not tied to any one type. Be warned, though: to get full use out of it, you would have to run your computer-to-modem connection at 38K baud or higher, and a stock Amiga will have trouble keeping up with that. (I'd LOVE to have problems like that...)

For those that are interested in the subject, I got most of my data from the book Data Compression by Gilbert Held (3rd ed). As technical prose goes, it's fairly well written (translation: you can understand what he's talking about), it covers all of the major techniques, and gives some sample programs for several of the techniques. The book is not without its flaws, but overall, I'd recommend it. ❑

# THE GAME ROOM

## Games

By
Gary Larkin

Last month I suggested some of the best War Games, this month I will attempt to recommend to you some of the best overall games old or new that will give you hours of consistent enjoyment. I will also grade these on a scale of 1 to 10 (10 being the best) and in these categories: EP = Ease Of Play, G = Graphics, O = Overall, SH = Shelf Life.

| Name | EP | G | O | SL |
|---|---|---|---|---|
| **4D Sports Boxing** | **8** | **7** | **8** | **7** |
| **ABC Wide World Of Sports Boxing** | **8** | **7** | **7** | **7** |
| **Arachnophobia** | **8** | **8** | **8** | **7** |
| **Atomino** | **8** | **7** | **7** | **8** |
| **Battle Chess** | **8** | **8** | **8** | **8** |
| **Black Gold** | **8** | **7** | **7** | **7** |
| **Boxing Manager** | **8** | **7** | **7** | **7** |
| **Fast Eddie's Pool** | **8** | **8** | **8** | **8** |
| **First Samurai** | **8** | **7** | **7** | **6** |
| **GODS** | **9** | **10** | **9** | **9** |
| **Indy 500** | **8** | **8** | **8** | **8** |
| **It Came From The Desert** | **8** | **8** | **8** | **8** |
| **Lemmings** | **9** | **9** | **9** | **9** |
| **Life & Death** | **7** | **8** | **7** | **7** |
| **Home Alone** | **8** | **8** | **7** | **7** |
| **Micro Prose Golf** | **8** | **9** | **8** | **8** |
| **New York Warriors** | **8** | **8** | **8** | **7** |
| **Panza Kick Boxing** | **9** | **9** | **9** | **9** |
| **Persian Gulf Inferno** | **8** | **8** | **8** | **7** |
| **Pirates** | **8** | **8** | **8** | **8** |
| **Pit Fighter** | **8** | **7** | **7** | **6** |
| **Populous** | **7** | **8** | **8** | **8** |
| **Powermonger** | **7** | **8** | **8** | **8** |
| **Prince Of Persia** | **8** | **8** | **8** | **8** |
| **RBI Baseball 2** | **8** | **9** | **8** | **9** |
| **Secret Of Monkey Island** | **8** | **8** | **8** | **8** |
| **Shadow Of The Beast** | **8** | **8** | **8** | **8** |
| **Shadow Warrior** | **8** | **9** | **8** | **8** |
| **Sim City** | **8** | **10** | **9** | **9** |
| **Stunt Car Racer** | **8** | **8** | **8** | **9** |
| **Railroad Tycoon** | **8** | **9** | **9** | **9** |
| **Reel Fishing** | **8** | **8** | **8** | **8** |
| **Robocop 3** | **8** | **8** | **7** | **7** |
| **T.V. Sports Football** | **8** | **9** | **9** | **9** |
| **Wayne Gretzky Hockey** | **8** | **8** | **8** | **8** |
| **Wild Wheels** | **8** | **8** | **7** | **8** |
| **Willy Beamish** | **8** | **9** | **8** | **8** |

It is an impossibility to grade every piece of software that is out there but this is my attempt to suggest to you some of the very best. Any questions or comments please call me at (412) 381-8415. ❑

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P.O. BOX 16126
Pittsburgh, PA 15242

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